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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,645	06/01/2001	Jeyhan Karaoguz	41996/CAG/B600	1717
23363	7590	09/29/2005	EXAMINER	
CHRISTIE, PARKER & HALE, LLP			KIM, KEVIN	
PO BOX 7068			ART UNIT	
PASADENA, CA 91109-7068			PAPER NUMBER	
			2638	

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/872,645	Applicant(s) KARAOGUZ, JEYHAN	
	Examiner Kevin Y. Kim	Art Unit 2638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4,13,19-42,45,52 and 58-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4,13,45,52 and 58-62 is/are allowed.
- 6) ☒ Claim(s) 19-21,23-28,31-33 and 35-40 is/are rejected.
- 7) ☒ Claim(s) 22, 29,30,34, 41,42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 6, 2005 has been entered.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 19-21,23-28,31-33,35-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin (previously cited) in view of Rich (US 5,862,460).

Claims 19 and 31.

Shin discloses (see Fig.6) an encoder (17) comprising, "a state machine" (21) for generating a plurality of state bits, and "an interface" (43) to couple an input (41) relating to one of the state bits into the state machine during a time period. Shin describes that an encoder is used in an RF communication. See col. 3, lines 18-30, describing the use of Turbo codes in PSC, i.e., personal communication system which is a radio frequency communication system. Shin fails to disclose "an RF stage coupled to the encoder," wherein they are "each an integral part of the transmitter." Rich shows an RF transmitter (102) wherein an encoder (110) and an RF stage (116,120, 122) are each an integral part of the transmitter. See Fig. 1.

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Thus, it would have been obvious to one skilled in the art to arrange the encoder of Shin coupled to the RF stage of in an RF transmitter, wherein the encoder and the RF stage are each an integral part of the transmitter, as taught by Rich, for the purpose of improving the bit error rate performance.

Claims 20 and 32.

Fig.6 shows that the “interface” (43) is a switch (SW).

Claims 21 and 33.

When the switch is closed i.e., during “a second period,” an input X_n is coupled into the state machine.

Claims 23 and 35.

The encoder has an output (P_N) that includes “a second one of the state bits,” i.e., one the values in the registers

Claims 24 and 36.

The interface (43) comprises an output (x_N) and the encoder output further includes the interface output.

Claims 25 and 37.

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The state machine is a 4 state finite machine, see Fig.1, thus reading on “a 2^p -state finite state machine” where p equals 2.

Claims 26 and 38.

Fig. 6 shows two “delay registers” represented by two rectangles.

Regarding claims 27 and 39 Fig.6 shows an adder coupled to the delay registers

Claims 28,40.

Though not described, “a transmit control unit” is required to operate the switches (43,45).

Allowable Subject Matter

4. Claims 4,13,45,52,58-62 are allowed.
5. Claims 22, 29,30,34, 41,42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is 571-272-3039. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin K. M. Lim

KEVIN K. M.
PATENT EXAMINER